1. INTRODUCTION

Project EASI (Easy Access for Students and Institutions) is an effort by members of the postsecondary education community to define and to implement a customer-focused "system" to support postsecondary education. The specific focus of Project EASI is on those processes and systems with which students, prospective students, and their families most directly interact. Within Project EASI, Project EASI/ED (Easy Access for Students and Institutions/US Department of Education) represents ED's initial effort to implement the Project EASI vision within the scope of its business processes and systems. ED's focus is on reengineering the 12 financial aid systems and associated processes used to manage and deliver postsecondary student financial aid authorized under Title IV of the Higher Education Act of 1965, as amended.
The *Project EASI/ED Transition Strategy* provides a plan for implementing Project EASI/ED. It defines the sequence for implementing Project EASI/ED functionality, tasks and duration estimates for implementation projects, and describes the underlying strategy for the transition from the current Title IV environment to Project EASI/ED. The *Project EASI/ED Transition Strategy* enables ED to communicate the duration of the overall project to stakeholders and to determine the first projects that will need statements of work.

The remainder of this section provides an overview of Project EASI/ED and of the *Project EASI/ED Transition Strategy*. Subsection 1.1 provides an overview of Project EASI/ED. Subsection 1.2 defines the intent of the document and the range of activities considered in the *Project EASI/ED Transition Strategy*. Subsection 1.3 describes how the *Project EASI/ED Transition Strategy* is related to other Project EASI/ED deliverables. Subsection 1.4 describes the sections and appendices included in the *Project EASI/ED Transition Strategy*.

1.1 Background

Project EASI began in January 1995 when a team of ED staff and representatives of the external postsecondary education community -- the Project EASI Core Team -- began defining the Project EASI vision. The team defined the following four objectives for Project EASI.

- **Create a customer focused "system" to support postsecondary education**. While the desire is to maximize the use and value of available automation, this "system" will also include manual support and processes as required to effectively reach all customers.

- **Provide the customer a single point of interface with the postsecondary education community**. Today, students, prospective students, and their families are required to deal with many separate organizations whose activities are largely uncoordinated. Creating a single point of interface with the postsecondary education community is expected to simplify interaction, and to improve the community's effectiveness in supporting customers and in executing business relationships with students and financial aid recipients.

- **Streamline, simplify, and improve the accessibility of processes associated with postsecondary education**. The processes associated with postsecondary education -- and particularly with delivery and management of postsecondary education student financial assistance -- are complex, paper intensive, and expensive to administer. Project EASI is

intended to provide more flexible, simplified and universally applicable processes to support postsecondary education.

- **Reduce costs associated with the management and delivery of services associated with postsecondary education**. The complexity and redundancy of current processes -- especially those associated with delivering and managing student financial assistance -- make them resource intensive (e.g., staff, information systems, time). By improving these processes and the efficiency with which technology can be applied by all involved organizations, Project EASI is expected to lower costs for all participants.

Project EASI/ED uses a tailored spiral methodology as defined in the *Project EASI/ED Program Management Plan* (January 7, 1997). This methodology encompasses seven life cycle phases:

- Concept
- Definition
- Design
- Construction
- Test
- Implementation
- Operation

The concept and definition phases are being completed for EASI/ED as a whole so that a sound basis is established for consistent implementation of the entire EASI/ED system through a variety of contracts and methods. The succeeding phases – design, construction, test, and implementation – are planned to occur iteratively over the course of the project as discrete segments of envisioned functionality are implemented.

In January 1997, *the Project EASI Concept Document* was initially published to baseline a shared understanding of the Project EASI vision. The *Project EASI Concept Document* (revised final dated June 23, 1997) marked the end of the concept phase of the system development life cycle. At that point, Project EASI/ED was initiated with commencement of the definition phase of its life cycle. Project EASI/ED is ED's initial effort to implement the Project EASI vision in the systems and processes used to manage and deliver Title IV aid. While EASI/ED is focused on the Title IV aid programs, its goal is to define processes and systems that might readily accommodate other, non-federal aid programs at a later time (e.g., state aid, private aid). The definition phase of the Project EASI/ED life cycle is due to end in October 1998.

The focus of the definition phase is to determine what the system needs to do and what standards must be complied with to implement the system; no design work occurs during this period. Beginning in January 1997, Project EASI/ED business area requirements (i.e., high-level functional and data requirements) were identified based upon the Project EASI concept and upon analysis of additional business functions fulfilled by the current Title IV systems and not addressed in the concept. These business requirements, published in the *Project EASI Business Area Requirements Document (BARD)* (July 1, 1997), form the basis for the remainder of system definition work being performed for EASI/ED. This work included the following principal efforts.

- **Determined EASI/ED framework architecture**. The framework architecture establishes the process and data distribution models for EASI/ED.

- **Defined EASI/ED subsystems**. Six application subsystems were defined for EASI/ED:

  - Aid Application
  - Aid Origination and Disbursement
  - Aid Repayment
  - Financial Services
  - Program Management and Oversight
  - Decision Support System

- **Developed EASI/ED Logical Data Model (LDM)**. The LDM initially identifies and defines the data required to fulfill business requirements identified in the *BARD*. It also defines relationships among these attributes and entities. The LDM supports implementation of voluntary data standards among ED and the community as EASI/ED development moves forward.

- **Defined EASI/ED logical interfaces, physical access mode requirements, and frequency of expected transactions**. Each logical data flow between EASI/ED and the external community was analyzed to determine the data that must be exchanged, the frequency of the exchange, and user access requirements.

- **Assessed implementation options by subsystem**. For any subsystem, up to five implementation options are possible.

  1. **Commercial-Off-the-Shelf Software:** COTS applications are software packages that are readily available in the marketplace and that do not require substantial programming or maintenance by the user. Three variations of COTS implementation were considered: standard, supplemented, and customized.

     - **Standard:** A COTS application fulfills 100 percent of the subsystem process' functionality without requiring modifications to the package.

     - **Supplemented:** A COTS application provides at least 50 percent of the subsystem process' functionality, and the remaining functionality is met by modifying the package using a third party tool or utility. The mechanism by which custom code is integrated with the COTS packages is provided with the COTS package. NOTE: If not provided, the application developer will need to create the mechanism to integrate custom code with the COTS package, and this is not considered to be a supplemented COTS implementation.

     - **Customized:** A COTS application provides at least 50 percent of the subsystem process' functionality and the remaining functionality is met by modifying the package using tools or utilities provided by the COTS application vendor.

2. **Reuse:** Reuse is defined as using modified Title IV systems within the Project EASI/ED system. In order for reuse to be plausible and efficient in the future system, the following changes are required to the Title IV systems:

    - Modification of existing ED Title IV data element definitions to conform to the EASI/ED enterprise database definitions

    - Modification of the application code to use the new data

    Once these changes are complete, the Title IV system is able to share data with the Project EASI/ED enterprise database while reusing existing application code.

3. **Reengineering:** Reengineering is the reverse engineering of software to extract the business logic followed by the forward engineering of the business logic into a new technical environment.

4. **Outsourcing:** Outsourcing entails contracting with a third party to perform services required to satisfy a subsystem's functionality, in whole or in part, without specifying *how* the provider performs the service. In outsourcing, the provider is fully responsible for managing the operation and assumes a substantial portion or all of the financial risk. The primary role of the outsourcing organization (i.e., ED) is to manage the agreement with the provider, not to oversee the actual work being performed.

5. **Custom Development:** Custom development involves an application developer writing application code tailored to ED's functional and technical needs.

EASI/ED subsystems and their component processes were analyzed to assess which of these options appeared to be appropriate to each. The result of this assessment is published in the *Project EASI/ED Application Services Definition Document (ASDD): Implementation Options Analysis (IOA*)(June 12, 1998). The *Project EASI/ED ASDD: IOA* examined reuse of current Title IV systems at a purely functional level, making no distinction between the reuse of actual application code and the reuse of just the business rules documented in application code. To reflect a finer granularity of reuse options for the current Title IV systems, the *Project EASI/ED Transition Strategy* separates the reuse of application code from the reengineering of business rules.

As Project EASI/ED leaves the definition phase of the life cycle, ED envisions using multiple, concurrent acquisitions to obtain program management and integration services necessary to manage the full EASI/ED effort and to implement each EASI/ED subsystem. Each subsystem may be implemented using one or more of the implementation options described above, alone or in combination with one another. The *Project EASI/ED Transition Strategy* reflects one set of these options. As ED prepares to undertake each phase, a cost/benefit analysis will be needed to fully assess which option presents the best value for ED. In addition, as the system is incrementally implemented, decisions regarding downstream activities will be affected by earlier decisions regarding system architecture and subsystem implementation, as well as, by changes in business requirements and technology.

1.2 Purpose and Scope

This subsection provides the purpose and scope of the *Project EASI/ED Transition Strategy* and describes the two key external components: Title IV systems and the Band Strategy. Subsection 1.2.1 presents the purpose and scope of the *Project EASI/ED Transition Strategy*. Subsection 1.2.2 identifies the current Title IV systems on which the transition to EASI/ED will have an impact. Subsection 1.2.3 briefly explains the Band Strategy and its relationship to the *Project EASI/ED Transition Strategy*.

1.2.1 Project EASI/ED Transition Strategy

The purpose of the *Project EASI/ED Transition Strategy* is to define an approach for planning and managing the transition from the current Title IV systems and process to those envisioned for EASI/ED. This strategy is reflected in the schedule and transition organization depicted in this document. The *Project EASI/ED Transition Strategy* is intended to be a tool to guide ED managers and supporting contractors in more detailed planning and execution of EASI/ED activities. Given this, it is expected to be a living document. The current *Transition Strategy* reflects one path to accomplish the transition.

The *Transition Strategy* schedule is primarily important as a tool for understanding the expected tasks, their durations, and the relationships among major elements of Project EASI/ED. The schedule is expressed in terms of calendar dates beginning October 1, 1998, although this does not reflect an agreed-upon start date for the work. Although ED reviewers requested that the schedule be expressed in terms of generic dates at this point -- i.e., Year 1, Year 2, Year N -- this was not possible within the scheduling tool. More importantly, that schedule representation would imply greater scheduling flexibility than is actually available for EASI/ED. There are four primary events that are sensitive to actual calendar dates:

- Implementation of the Application Subsystem needs to be aligned with the annual business cycle for receipt and processing of the Free Application for Federal Student Aid, which runs from January to January each year.

- Implementation of the Aid Origination and Disbursement subsystem must align with the annual business cycle for Direct Loan originations, which runs from March to March each year.

- Implementation of the Aid Repayment subsystem must occur not later than the end of calendar year 2003, the latest date that the current systems can support requirements.

- Current contracts will expire on specified calendar dates. If the transition schedule changes substantially, ED will likely need to recompete or to renegotiate a higher number of contracts. The proximity of EASI/ED implementation activities to contract end dates must also be carefully examined to minimize negative impact on EASI/ED implementation schedules.

Thus, if the transition schedule needs to change, the dates associated with each item listed above need to be examined carefully -- a simple month-for-month slip of the plan is not workable. As

more is learned regarding the organization, as requirements change, as technology evolves, and as decisions are made regarding system-wide design and each subsystem's implementation, the *Transition Strategy* should be updated to reflect the impact or changes to the strategy.

The *Project EASI/ED Transition Strategy* includes the major components described below:

- A master transition schedule that defines major activities, associated timeframes, and relationships among activities for each phase of EASI/ED implementation and for EASI/ED-wide transition activities. The high-level schedule in the *Transition Strategy* may be augmented by detailed work plans prepared for specific activities or projects (e.g., for implementation of a specific subsystem) as these contracts are awarded. The schedule takes into consideration the infrastructure required to support EASI/ED, system-wide design and implementation activities, the Project EASI/ED subsystems, data conversion and bridging, and impacts to the current Title IV systems. Project EASI/ED infrastructure encompasses the EASI/ED enterprise database, and the hardware, system software, and communications required for development, test, training, and production.

- Structure, roles, and responsibilities for a transition management organization to carry out the Project EASI/ED implementation.

- Issues and risks related to the transition.

1.2.2 Current Title IV Systems

Within ED, the Office of Postsecondary Education (OPE), Student Financial Assistance Programs (SFAP), administers and manages postsecondary student financial aid programs authorized under Title IV of the Higher Education Act of 1965, as amended. Currently, ED/OPE/SFAP uses 12 major information systems to fulfill this responsibility.

- Campus-Based Programs System (CBS)
- Central Processing System (CPS)/Electronic Data Entry (EDE) Express/Free Application for Federal Student Aid (FAFSA) on the Web
- Direct Loan Central Database System (CDS)
- Direct Loan Consolidation System (LCS)
- Direct Loan Origination System (LOS)
- Direct Loan Servicing System (LSS)
- Federal Family Education Loan Program (FFELP) System
- Multiple Data Entry (MDE) Contractor
- National Student Loan Data System (NSLDS)
- Postsecondary Education Participants System (PEPS)
- Recipient Financial Management System (RFMS)
- Title IV Wide Area Network (TIV WAN)

ED uses contracts for development and maintenance of these systems. The *Project EASI/ED Transition Strategy* addresses the impacts of the transition on these systems and contracts.

1.2.3 Band Strategy

Early in 1997, ED proposed the Band Strategy as an approach to re-architect the Title IV system contract structure. The Band Strategy is essentially a functionally driven approach to contracting for the services that ED requires for the Title IV programs. Band 1, Data Center and Communications, is the only component of this strategy currently being implemented. Band 1 provides the mainframe and server-level hardware and system software required to operate the Title IV systems in their current configurations. Band 1 will also provide the value-added network (VAN) (i.e., TIV WAN) connectivity from the Title IV systems to other telecommunication networks (e.g., Internet, FTS 2000), and data center operations and support. Band 1 does not include redesign of the current technical architecture.

ED is migrating the current Title IV systems to Band 1 now. Because the Band 1 migration is expected to be completed before any Project EASI/ED subsystems are implemented, the transition to Project EASI/ED is not expected to impact the Band 1 migration.

1.3 Relationship to Other Project EASI/ED Deliverables

The *Project EASI/ED Transition Strategy* is the final major document in the definition phase for Project EASI/ED. *Transition Strategy* content built upon several other Project EASI/ED products.

- *Project EASI Concept Document* (June 23, 1997) - provides the strategic vision for EASI and for EASI/ED. The principles, issues, and objectives identified in the *Concept Document* underlay the evaluation criteria documented in the *Project EASI/ED Transition Strategy*.

- *Project EASI/ED Business Area Requirements Document* (June 10, 1998) - documents the business requirements that were considered in assessing the size and complexity of Project EASI/ED subsystems.

- *Project EASI/ED Program Management Plan* (January 7, 1997) - provides guidelines for managing and implementing Project EASI/ED that form the basis for the roles and responsibilities defined for the transition organization.

- *Project EASI/ED Application Services Definition Document: Subsystem and Interface Definition* (June 12, 1998) - documents the EASI/ED subsystems, and logical interface, physical access, and processing mode requirements. The *ASDD/SID* was the basis for assessing the number of interfaces between Project EASI/ED systems and external entities for consideration in the *Project EASI/ED Transition Strategy*.

- *Project EASI/ED Application Services Definition Document: Implementation Options Analysis* (June 22, 1998) - presents the results of the implementation options analysis for the EASI/ED subsystems. The *IOA* was used as a starting point for assessing implementation options reflected in the *Transition Strategy*.

- *Project EASI/ED Technical Vision and Target Architecture (TVTA) Report* (September 15, 1997) - initially defined the EASI/ED framework architecture. The TVTA description

of the current Title IV systems' physical structure was used as a starting point in assessing the physical transition strategy (e.g., partial shutdown potential) from current systems to EASI/ED.

- *Project EASI/ED Common Operating Environment Document (COE)* (July 10, 1998) - defines architecture services expected to comprise Project EASI/ED and identifies standards with which any Project EASI/ED implementation must comply. The *COE* standards were used to assess the feasibility and complexity of early conversion of the current Title IV systems to the COE. The *COE* also provided a notional architecture topology that informed the projected EASI/ED transition strategy.

- *Project EASI/ED Configuration Management Plan (CM Plan)* (December 1, 1997) - describes the processes and procedures that ensure the systematic and orderly control of Project EASI/ED throughout its life cycle.

- *Project EASI/ED Logical Data Model Document (LDMD)* (May 15, 1998) - initially defines the data required to implement functionality specified in the *BARD*. The *LDMD* entity type counts and the relationships of entity types to EASI/ED subsystems were used to assess data volumes and options for implementing Project EASI/ED subsystems.

1.4 Document Organization and Content

The remainder of the *Project EASI/ED Transition Strategy* is organized into the following sections:

Section 2 – Project EASI/ED Transition Strategy Assumptions. This section describes all assumptions underlying the analysis and recommendations of the *Project EASI/ED Transition Strategy*.

Section 3 - Project EASI/ED Transition Approach. This section presents the underlying principles and strategies that guided transition analysis and planning. Subsection 3.1 identifies the principal risks that EASI/ED implementation presents, and explains the strategies that were adopted to broadly address those risks. Subsection 3.2 explains the implementation concept – the implementation approaches used and the implied architecture – on which the transition schedule was based. Subsection 3.3 states the sequence in which the EASI/ED subsystems will be implemented and briefly explains the basis for this sequence. Subsection 3.4 discusses other considerations that were factored into the transition schedule's development.

Section 4 - Project EASI/ED Transition Schedule. This section provides an overview of the transition schedule in five graphics and details projects in project purpose worksheets. Subsection 4.1 uses graphics to summarize major facets of the transition. Subsection 4.2 presents Project EASI/ED transition worksheets for the major elements of the transition. For each project, the worksheets provide a project name, project number, project purpose, project duration, key dates, assumptions, key relationships, major activities, and decision factors.

Section 5 - Transition Management Organization. This section describes the transition management organization structure in subsection 5.1, and the roles and responsibilities required to plan and manage the transition to EASI/ED in subsection 5.2.

Section 6 - Open Issues, Risks, and Risk Mitigation Strategies. Subsection 6.1 identifies open issues related to the transition to EASI/ED, but unresolved. Subsection 6.2 presents technical, schedule, and cost risks and candidate mitigation strategies.

Detailed information supplementing the sections listed above is presented in the following appendices:

Appendix A - Acronyms. This appendix provides a list of all acronyms used in this document and their associated definitions.

Appendix B - Glossary. This appendix provides a list of key terms and their definitions.

Appendix C - Methodology. This appendix describes the methodology used to develop the *Project EASI/ED Transition Strategy*.

Appendix D - Analysis of Title IV Systems. This appendix presents the current Title IV systems' physical profiles, the scoring of the current Title IV systems on the feasibility of partial shutdown, the Project EASI/ED subsystem sequence analysis, and the analysis of early conversion of the current Title IV systems to the Project EASI/ED COE.

Appendix E - Analysis of Project EASI/ED Subsystems. This appendix provides an overview of the Project EASI/ED subsystems and presents analysis related to the selection of the implementation options.

Appendix F - Mapping of Project EASI/ED Subsystems to Title IV Systems/Subsystems. This appendix presents the results of two mapping efforts. First, it presents the results of mappings between Project EASI/ED subsystems and the current Title IV systems. The mappings are based on a functionality comparison using mapping data already resident in the Project EASI/ED Requirements Traceability Matrix (RTM). The RTM is used to provide traceability from Project EASI/ED requirements to current or envisioned functionality that constitute Project EASI/ED subsystems. Second, it presents the results of mappings between EASI/ED subsystems and the current Title IV system components that were identified as part of the assessment for partial migration. This mapping supported the assessment of which Project EASI/ED functionality is required before an entire Title IV system can be replaced.

Appendix G - Project EASI/ED Master Transition Schedule. This appendix presents the master transition schedule for Project EASI/ED.

Appendix H - References. This appendix presents the references used to develop the *Project EASI/ED Transition Strategy*.